

TOUGH JOBSITES. TOUGHER LIGHTS.

Safety | Reliability | High Performance | Proven Durability



Designed + Manufactured in America

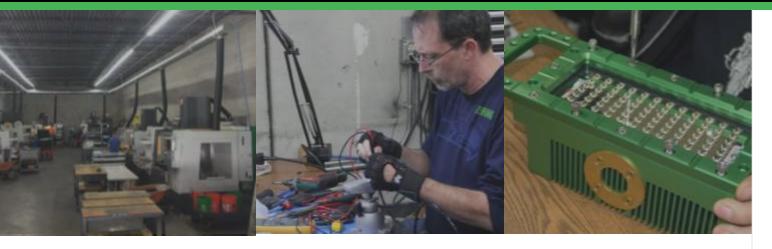
© WT Presentation Catalog - Spring 2017





ABOUT US Our Corporate Focus





In 1978, **Western Technology, Inc.** built our first light and deadman remote control specifically designed for the severe environments of abrasive blasting. **Since then, Western Technology has built a business by solving problems related to lighting critical, and often difficult to get to, temporary work spaces.**

With an emphasis on **safety** and **durability**, every component is built to withstand the rigors of *frequent handling* with features allowing for *easy positioning* and *simple maintenance*.

Welcome to Western Technology. Our corporate focus is designing world-class, portable, LED work lights...each recognized for their "tool-like" reliability in the demanding work spaces of our marine, industrial, and aviation clients. Built in America and certified to meet the most stringent safety standards. – Jim Giese, President

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KICK-IT TOUGH" FAMILY

Explosion Proof | Ordinary Location | Abrasive Blast



Our **KICK- IT TOUGH™ Family** of Portable LED Safety Lights is *growing...*

Explosion Proof | The Originals

- 1 \model BRICK™
- 2 \model BRICKETTE™
- 3 \BSTRIKER™

Introducing...

4 \model BODYLIGHT™: Battery Powered Explosion Proof Light

Ordinary Location | LED Lighting

5 \model POCKETLIGHT™: BATTERY POWERED HAND-HELD AREA LIGHT

Now Including...

Abrasive Blast | LED Lighting

6 ¥3475LED™: 6 LED ABRASIVE BLAST LIGHT





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SEE THE DIFFERENCE.

Redefining Portable Lighting



Our **KICK- IT TOUGH™ LED Safety Lights** set the new standard for excellence. They are built to *reduce jobsite safety risks*. With easy-to-calculate ROI based on reduction of number of lights required, installation/removal time, maintenance, cost to operate, improved productivity & even reduced CO₂ emissions...

"We Won't Leave You in the Dark"







SIGNATURE LINE OF

Portable Explosion Proof LED Lighting



Western Technology's Signature Line of **EXPLOSION PROOF KICK-IT TOUGH™ LED Safety Lights** are built to the most

stringent standards &

CERTIFICATIONS:

- EXPLOSION PROOF
- PORTABLE
- WET LOCATION
- LOW VOLTAGE





Designed + Manufactured in America



SAFETY BEYOND CERTIFICATION

Proven Reliability Under Extreme Conditions













Our Explosion Proof Line of KICK-IT TOUGH™ LED Safety Lights are designed to meet your most demanding workplace requirements. *They are purposely built:*

- For SAFETY and CERTIFIED for Hazardous Locations:
 - Class I, Division 1 & 2, Groups C & D
 - Class II, Division 1 & 2, Groups E, F, & G
 - o CSA Zones 1, & 2; Zones 20, 21, & 22
 - Constant thermal monitoring for maintaining safe T-code temperature
- For WET LOCATION: Water tight and certified
 (Our lights have been tested up to 100 psi, so you can operate them with confidence in wet environments)
- For FLEXIBILITY: Each system of lights has versatile magnetic/mechanical mounting options.
- For VISUAL AID: Choices include...light shielding, light projection, light diffusion, color temperature control
- For PROTECTION: Polyurethane bumpers wrapping the lights & optional safety straps.
- For **DURABILITY**: Constructed out of fully-machined solid blocks of aluminum.



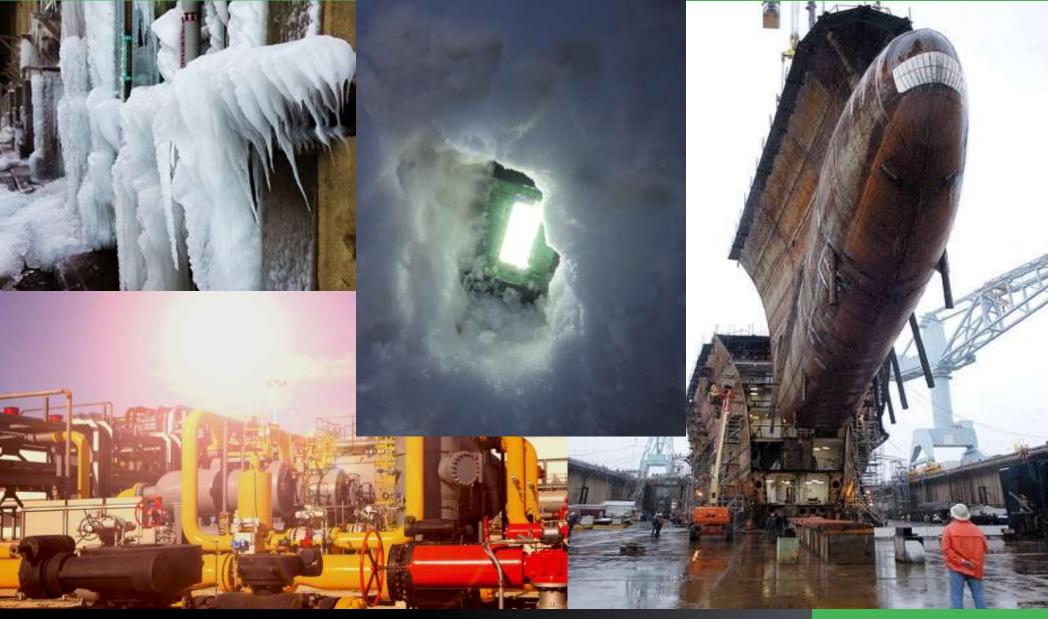
"I've heard nothing but positive feedback regarding your participation in the meeting and the products you demonstrated."

- GOVERNMENT CONTRACTOR



WEATHER-PROOF LIGHTING Proven Reliability in All Weather Conditions











Product Features

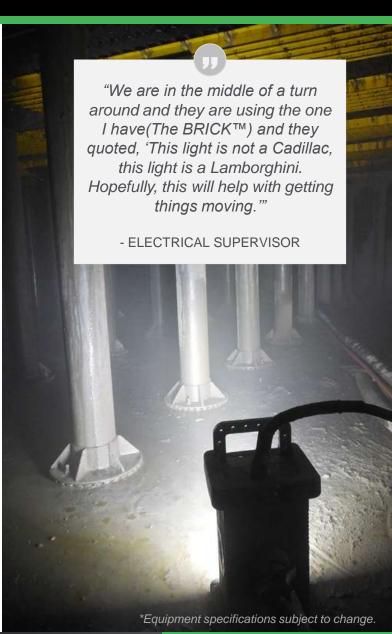
- Certified for:
- Class I, Div. 1 & 2, Groups C & D
- Class II, Div. 1 & 2, Groups E F, & G
- CSA Zones 1 & 2: Zones 20, 21, & 22
- Conforms to:
- UL Stds 153, 781, 844
- Certified to:
- CSA Stds C22.2#s 12, 25, 137
- Suitable for:
- Wet Location Use
- Certified as:
- Portable Luminary (Portable Luminaire)
- Rated + Optics:
- 50,000 Lux at 1', >11,500 Lumens
- Power:
- 36VDC, 2-3 Amps (A & C Models)
- 120-240VAC, 2.2-1.2Amps (Model B)





















Roll Top Anti-Glare Diffuser



High Dome Diffuser



High Dome Diffuser and Body Wrap



Replacement Blast Shields (12 Pack)



Paint Overspray Bags (50 Pack)



Kit Option - Rolling Resin Carrying Case



Designed + Manufactured in America







4 Mounting Locations



Mechanical or Magnetic Mounting Plates



Quad Pod-Hand Cart Mechanical Knuckle



Quad Pod-Hand Cart Magnetic Knuckle

Designed + Manufactured in America











Ladder Mount



Tripod Mount [Base & 22" Riser] (Shown with Magnetic Knuckle)



A-Frame



Quad Pod/-Hand Cart Topper (Magnetic Plate Attachment)



Quad Pod/-Hand Cart Topper (Mechanical Plate Attachment)



Hand Cart Mount (Shown w/ 2 BRICKs, Double Yoke Mount & Knuckles)



(Shown w/ 2 BRICKs, Double Yoke Mount, Knuckle & Puck Mount)



Magnetic Pipe Mount

(Mechanical Mounting Plate)

(Magnetic Mounting Plate)



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THERE'S A BETTER SOLUTION

Benefits of Switching to Western Technology











Product Features

- Certified for:
 - Suitable for simultaneous use in...
- Class I, Div. 1 & 2, Groups C & D
- Class II, Div. 1 & 2, Groups E F, & G
- CSA Zones 1 & 2; Zones 20, 21, & 22
- Conforms to:
- UL Stds 153, 8750, 844
- Certified to:
- CSA Stds C22.2#s 12, 25, 30, 137, 250.13
- Suitable for:
- Wet Location Use, Type 6P
- · Certified as:
- Portable Luminary (Portable Luminaire)
- Rated + Optics:
- 26,000 Lux at 1', >2,500 Lumens
- Power:
- 36VDC, 2-3 Amps (A & C Models)
- 120-240VAC, 2.2-1.2Amps (Model B)



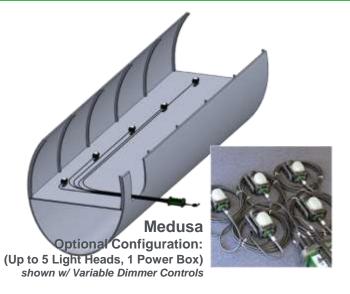














Kit OptionRolling Resin Carrying Case



Long Slotted Handle (High Profile)



Long Slotted Handle (Low Profile)



Long Solid Handle (High Profile)



Long Solid Handle (Low Profile)



Long Magnetic Handle (High Profile)



Long Magnetic Handle (Low Profile)



Short Slotted Handle (High Profile)



Short Slotted Handle (Low Profile)

*Equipment specifications subject to change.



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WESTERN TECHNOLOGY







Short Handle Drop Light (shown with Hook Mount)

Product Features

- Certified for:
- Class I, Div. 1 & 2, Groups C & D
- Class II, Div. 1 & 2, Groups E F, & G
- CSA Zones 1 & 2; Zones 20, 21, & 22
- Conforms to:
- UL Stds 153, 8750, 781, 844
- Certified to:
- CSA Stds C22.2#s 12, 25, 137
- Suitable for:
- Wet Location Use
- Certified as:
- Portable Luminary (Portable Luminaire)
- Rated + Optics:
- 25° collimating (refractive) optic: 45.000 Lux at 1'. >2.100 Lumens
- Power:
- 21VDC, 800mA, LVLE (A & C Models)
- 120VAC, 3A (Model 8100B)











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Short Handle Blast Light

Short Handle

(Complete System)

Replaceable

Lenses

VARIABLE LIGHT CONTROL

Rheostat Option



KICK-IT TOUGH™ LED Safety Lights are offered with a rheostat option to adjust illumination output.

Options Include:

- Variable Light Intensity tune from low to maximum light output
- Variable Light Color tune from low Kelvin temperature (e.g. 4000°K) to high Kelvin temperature (e.g. 7000°K)
- Variable Spectral Emission switch between visible, infrared, or ultraviolet light output
- Blended Spectral Emissions adjust spectral emission for specific utility, such as usage in different atmospheres or illumination of varying substrate color





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COMING SOON! **NEW PRODUCT**

CURRENTLY UNDERGOING CERTIFICATION

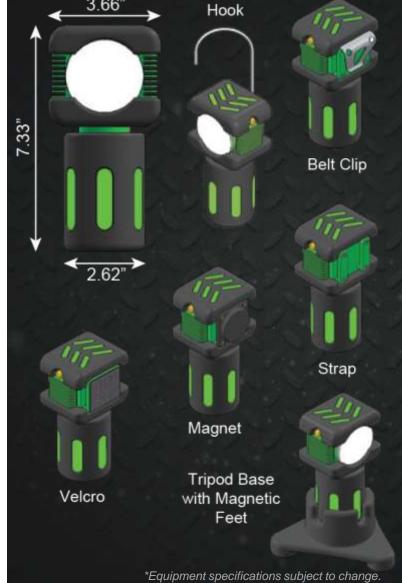
Product Features

- Certified for:
- Class I, Div. 1 & 2, Groups C & D
- Class II, Div. 1 & 2, Groups E F, & G
- CSA Zones 1 & 2; Zones 20, 21, & 22
- Suitable for:
- Wet Location Use
- Floodlight Projection
- + Optics
- Glow in the Dark
- Battery Powered:
- Rechargeable









3.66"



Shown

w/ Optional

Diffuser

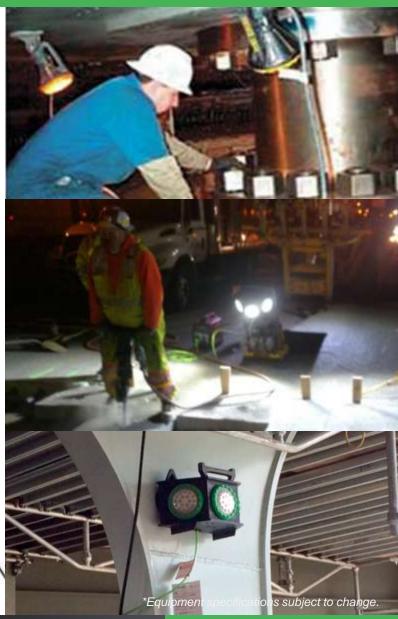




Product Features

- Temporary jobsite lighting for Ordinary Locations
- 150 lbs pull industrial strength magnets for quick sure placement
- Durable polyurethane construction
- Uses Par 38LED bulbs
- 12-24 AC/DC or 155VAC available





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4210LED Mountable LED Work **Light (Single Lamp)**

WESTERN TECHNOLOGY



Replacement parts

ORDINARY LOCATION LIGHTING





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4300-3 (3 Light Head Stringer)

SPOTTER™

LED Rechargeable Flashlight





All items included



Product Features

- Light Output (rated + optics):
- 295 Lumens
- Beam:
- 1000 Ft (300 meters)
- 25° beam angle
- Housing:
- Aircraft-grade Anodized Aluminum
- Battery Powered:
- Rechargeable: NiCD
- AC & DC Charger

"I wanted to thank you so much for coming down and helping present your great product line. I have not seen a product so full of features and benefits in a very long time...and have been given orders already for 20 rechargeable flashlights. I am sure I will have some orders for some BRICKs within days. What a pleasure you were to work with, again thank you very much."

- DISTRIBUTOR



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POCKETLIGHT WESTERN TECHNOLOGY



CURRENTLY UNDERGOING FIELD TESTING









Hook





Product Features

- Floodlight Projection
- Perfect for Inspection work
- Battery Powered:
- Rechargeable
- Hands-Free Mounting:
- Hook
- Magnet
- Velcro
- Strap
- Belt Clip









Replaceable Lenses (Box of 12)



Product Features

- Light Output (rated + optics):
- >40,000 Lux @ 1ft; >1,200 Lumens
- Spot Light Projection
- 25° Refractive Optic Design
- Housing/Construction:
- Aluminum, Polyurethane-wrapped
- Replacement Parts:
- Pyrex Blast Lenses (Box of 12)
- Halo Bumpers
- High & Low Stanchions
 - onfigurations:
- Configurations:
- Options Available





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ABRASIVE BLAST LIGHTS

Available Options from Western Technology

















Model 3600 Halogen No-Air Aluminum Blast Light



Designed + Manufactured in America

DEADMAN CONTROLS

2-Wire, 3-Wire, & 4-Wire configurations

Included with each: (unique ball & chain designed for safety and ease of use)





1001-REP-3K: 3-Wired Repairable Electric DC (Abrasive Blast)



1001-4K: 2-Wired Sealed Electric DC (Abrasive Blast)



1001-REPK: 2-Wired Repairable Electric DC (Abrasive Blast)



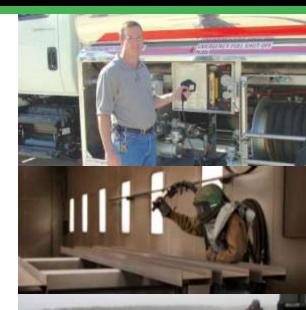
1004HC Wrist-EZ:
Repairable
Electric DC (Abrasive Blast)



Apollo4: 4-Wired Sealed Electric DC (Abrasive Blast)



1003 Pistol Grip:
2-Wired Sealed
Electric DC (Fueling, Runway Control, drone launch)







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OLL & GAS Exploration, Production, & Maintenance













"Immediately after receiving the first light we ordered, I requested a second one as the performance was absolutely incredible.

"The light has been a big hit on the rig and other departments are always asking to borrow ours. I plan on ordering several others for them. The magnetic knuckle really makes tank entry a breeze.

"Please keep in contact with us, especially if you have any new products that are generated. Thanks for all your help!"

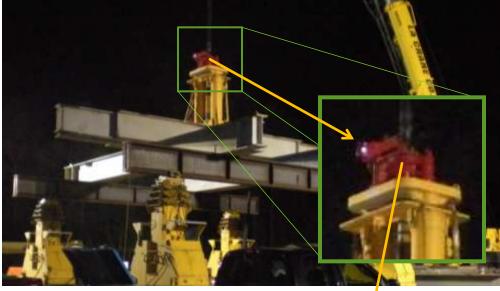
- SHIP'S CHIEF MATE

OFFSHORE DRILLING RIGS Lighting for Confined Spaces & Hazardous Locations



WELL HEAD INSTALLATION & MAINTENANCE Lighting for High Risk Worksites







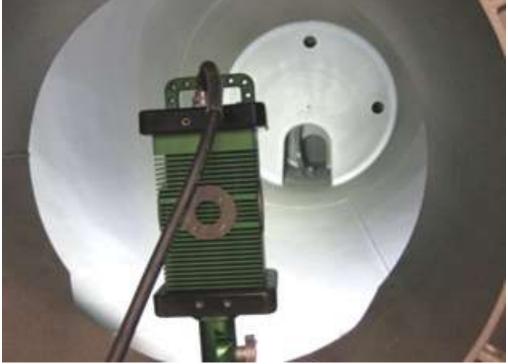
STORAGE TANKS Manufacturing & Maintenance











RAILCAR Manufacturing, Maintenance & Inspection



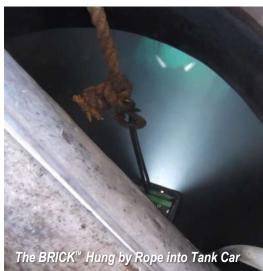












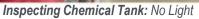
CHEMICAL TANKS Manufacturing, Maintenance & Inspection

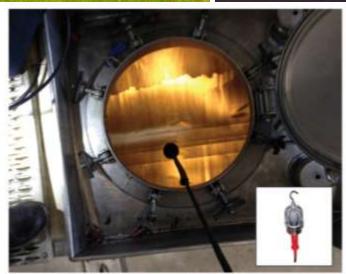












Inspecting Chemical Tank: Incandescent Light



The STRIKER™ White Bright LED Light!



CHEMICAL PLANTS & REFINERIES Construction, Maintenance & Inspection





"...We utilized the 9610C - Explosion Proof LED light head (The BRICK™). I have included some pictures...from inside our Hot Lime Softener & Line Cleaning, Flare Knockout Drum & Flow Splitter. We had excellent feedback on The BRICK[™] Light, everyone who used it was very impressed with the illumination & portability. We are going to use them again in the upcoming Plant Shutdown May 2014. Stay tuned for more feedback!!"

- REFINERY CUSTOMER









ELECTRIC POWER PRODUCERS Coal, Nuclear, Hydro, Natural Gas & Wind















GAS/WATER PIPE REPAIR

Utility Work – Gases & Wet Locations





"Here are the responses I've received on The Bricks™ performance:

Portability: Does not need to be on a stand.

Durability: Can be accidentally knocked over and still performs.

Light output: Outstanding.

Adapters: Stands, tripods, etc are all well made.

Heat Sink: Unit cools quickly and can be stored without much down time.

Cord: Strong & long enough to meet the demands of the field.

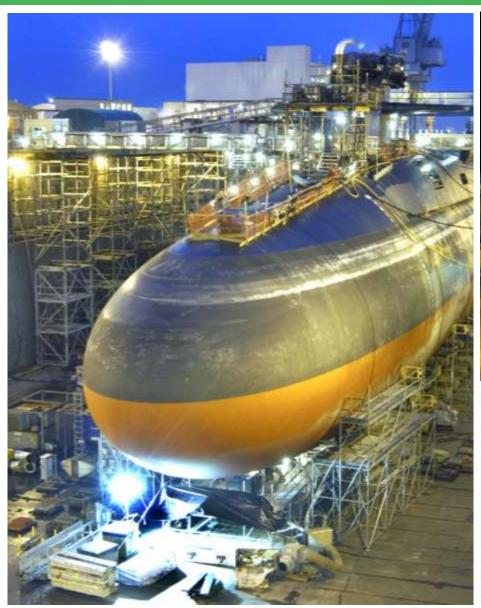
Overall the best outside lighting in/out of a gaseous atmosphere anyone has used."

- DISTRIBUTOR FOR GAS CUSTOMERS





Ship Building, Repair & Maintenance



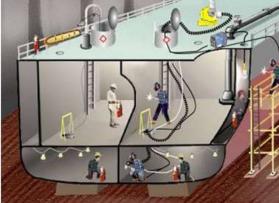












AVIATION & AEROSPACE Manufacturing & Maintenance















IMPRESSIVE AREA LIGHT

The BRICK™ Illuminating a Mill at 200 Feet



BEFORE The BRICK™

AFTER The BRICK™ (powered by truck battery)

CONTAINMENT/CONSTRUCTION Lighting for Confined Spaces







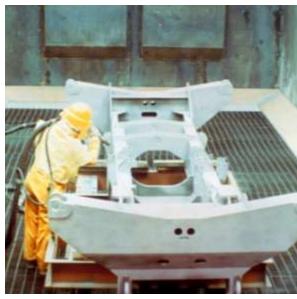
CONTRACTORS/FABRICATORS

Abrasive Blasting, Coating, Painting & Hydro-blasting









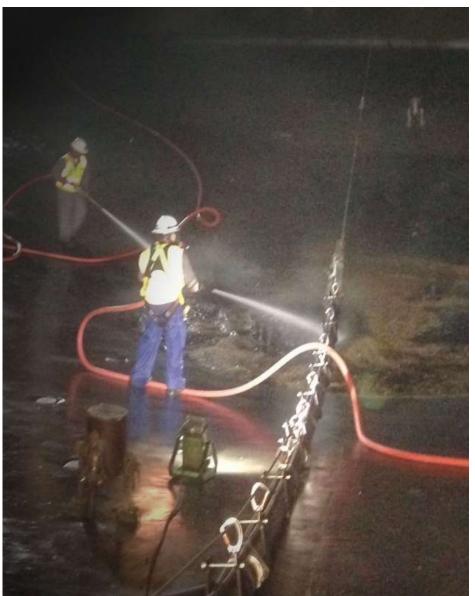






WATER MAINTENANCE & DISTRIBUTION

Wet Location Certified Lighting











"Yes, the light was awesome!
It made a huge difference with
the job and Safety. We truly
appreciate your effort to help
make it happen. I am hoping to
place an order for the magnetic
stand and make it even more
versatile."

- CONTRACTOR





ELECTRIC POWER PRODUCERS

*List of Customers who have purchased Western Technology Product(s)



*This is a partial list of customers who have purchased Western Technology product(s). The product(s) was purchased by a department, division, or group within the larger organization. The use of a logo does not constitute endorsement of any kind by these organizations. Logo use is simply to visually list names of companies or organizations that have chosen Western Technology products as lighting solutions.



PETRO CHEMICAL/REFINERIES

*List of Customers who have purchased Western Technology Product(s)















































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GAS DISTRIBUTORS

*List of Customers who have purchased Western Technology Product(s)



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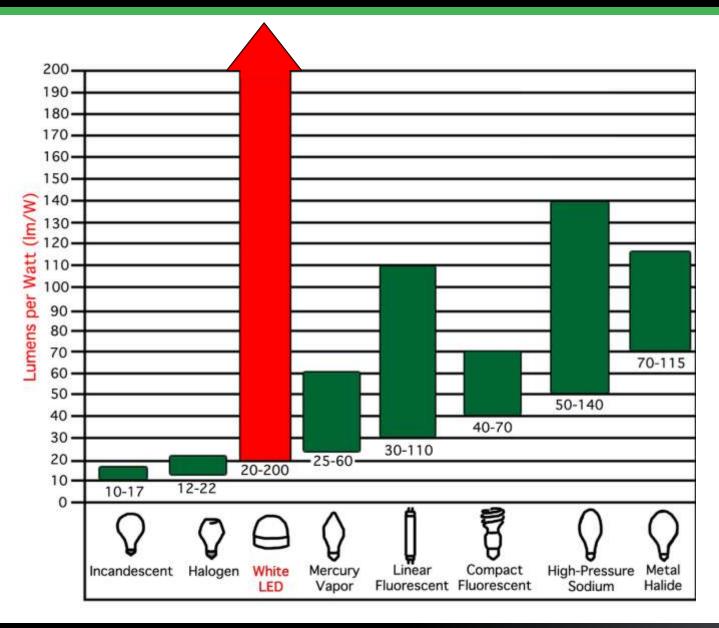


PORTABLE LIGHTING SPECIALIST Explosion Proof | Intrinsically Safe | Ordinary Location | Abrasive Blast



WHY LEDS

Lumens per Watt Comparison



Light Emitting Diode (LED) technology has rapidly advanced in just the last two years.

When compared to all other lighting technologies, LEDs offer the greatest amount of lumens per watt (lm/W) – THEY'RE VERY EFFICIENT

WHY LEDs

Cost Savings to operate The BRICK™

Conventional Fixtures:			Western Technology 9610 Brick LED:		
Fixture Type:	Watts:	Lamp Life (hrs):	Watts:	LED Life (hrs):	LED Energy Savings:
250W Metal Halide/ Mercury Vapor	289	20,000	68	60,000	76%
400W Metal Halide/ Mercury Vapor	450	20,000	68	60,000	85%
54W 4 Lamp T5HO Fluorescent	250	30,000	68	60,000	73%
Fixture Type:	LED Energy Savings:		Re-Lamp & Maint. Savings:		LED kWh Saved:
250W Metal Halide/ Mercury Vapor	\$193		\$560		1,929
400W Metal Halide/ Mercury Vapor	\$334		\$560		3,334
54W 4 Lamp T5HO Fluorescent	\$341		\$277		3,405
Fixture Type:	CO ₂ Savings (lbs):		LED kWh Saved:		Mercury Reduced:
250W Metal Halide/ Mercury Vapor	3,307		1,929		27 mg
400W Metal Halide/ Mercury Vapor	5,719		3,334		35 mg
54W 4 Lamp T5HO Fluorescent	5,839		3,405		18 mg

M

"The Brick lights worked well in our application and we are very satisfied with their performance. We will use them in the future for this job."

- CONTRACTOR

Assuming \$0.10 per kWh, \$75 labor rate, operating 24 hrs/day

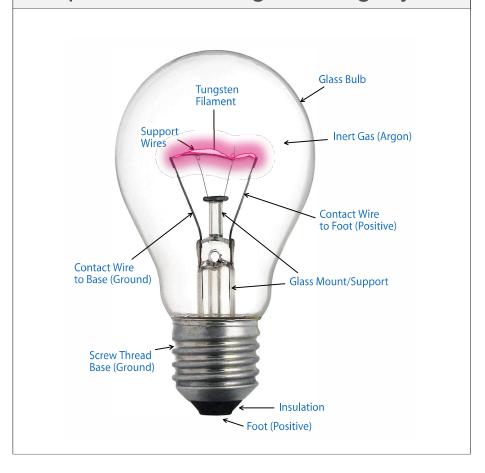
Please Note: Equipment specifications subject to change.



HOW IT WORKS

MAKING LIGHT | Incandescent / CFLs

Incandescent bulbs produce light by heating a filament wire to a high temperature until it glows brightly.



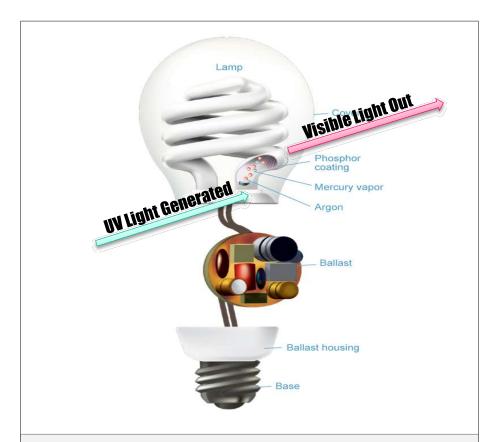


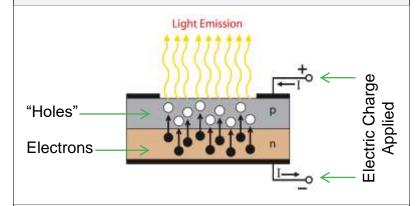
Photo-luminescent bulbs (such as CFLs) generate and absorb UV light and then re-radiate it as visible light using a phosphor coating.

HOW IT WORKS

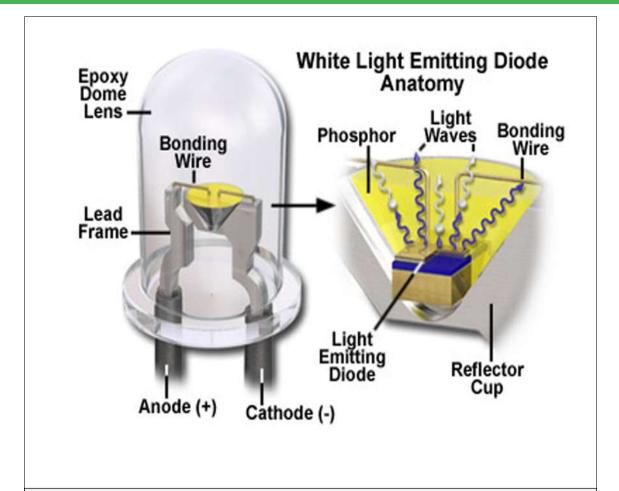
MAKING LIGHT | LEDS

A semi-conductor has both negative (n) and positively (p) charged sections. n-sections are full of electrons; p-sections are full of "holes".

Applying an electric charge to a semi-conductor causes electrons to move from n-sections to p-sections.



When a charge is applied to an LED (a type of semi-conductor), electro-luminescent UV light is emitted as a bi-product of electrons moving from n-sections to p-sections.

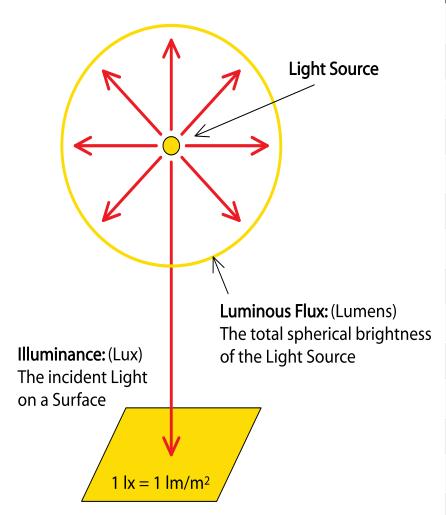


A phosphor coating is used in the LED's reflector cup to convert the electro-luminescent UV light into white, visible light.

Light Terminology

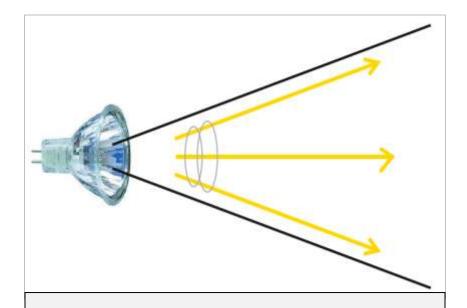
Term	Definition	Units	How to Interpret
Color Temperature	Color of Light	Kelvin (K)	Lower Kelvins (1500°K) -Light shifted toward Red Higher Kelvins (9000°K) - Light shifted toward Blue
Color Rendering Index (CRI)	Light's effect on color	Scale of 0 to 100 with sunlight at 100	The closer the number to a value of 100, the more "true" the color will look in that light
Brightness – Luminous Flux	The total brightness of the light source	Lumens (Im)	Higher lumens = brighter light
Illuminance	The total brightness or intensity of the incident light at a surface	Lux (lx) 1 lx = 1 lm/m ²	Higher lux = brighter light incident (per unit area/at a surface)
Power	Amount of electrical energy consumed	Watts (W)	Lower watts = less energy consumption
Efficacy	The efficiency of the bulb to convert electricity into light	Lumens per Watt (lm/W)	More efficient bulbs provide more light using less energy

Examples of Illuminance



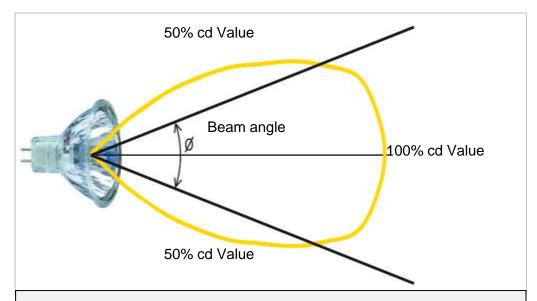
Illuminance	Example		
10 ⁻⁴ lux	Total starlight, overcast sky		
0.002 lux	Moonless clear night sky with airglow		
0.01 lux	Quarter moon		
0.27 lux	Full moon on a clear night		
1 lux	Full moon overhead at tropical latitudes		
3.4 lux	Dark limit of civil twilight under a clear sky		
50 lux	Family living room		
80 lux	Hallway		
100 lux	Very dark overcast day		
320–500 lux	Office lighting		
400 lux	Sunrise or sunset on a clear day.		
1,000 lux	Overcast day; typical TV studio lighting		
10,000–25,000 lux	Full daylight (not direct sun)		
32,000–130,000 lux	Direct sunlight		

Luminous Intensity & Beam Angle



Candela (cd) is the international unit of luminous intensity – a measure of emitted light.

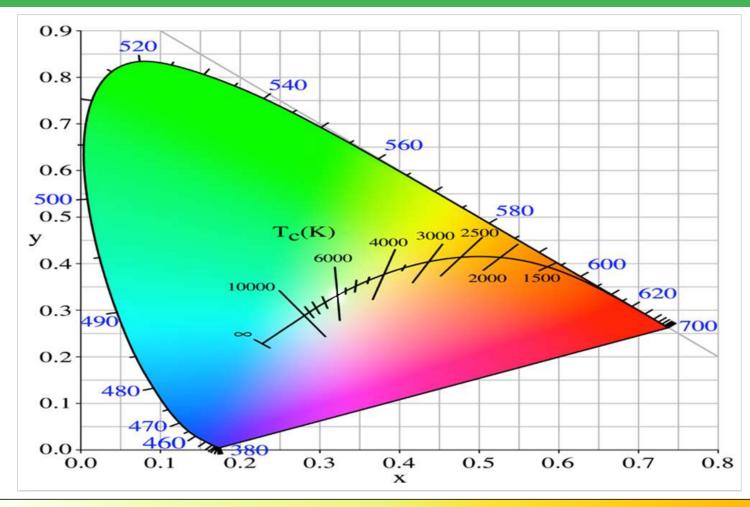
The Formula: Candela = Lumen/Solid Angle



Beam Angle is the angle capturing 50% of the maximum intensity of the Light.

Beam angle demonstrates the candela distribution.

Color Temperature of Light



LEDs - Range from UV to IR

CLOUDY ~ 9600°K

SUNLIGHT ~ 6500°K

INDIRECT SUN ~ 5500°K

FLUORESCENT ~ 4000°K

HALOGEN ~ 3200°K

INCANDESCENT ~ 2700°K

HPS ~ 1900°K

CANDLE ~ 1900°K

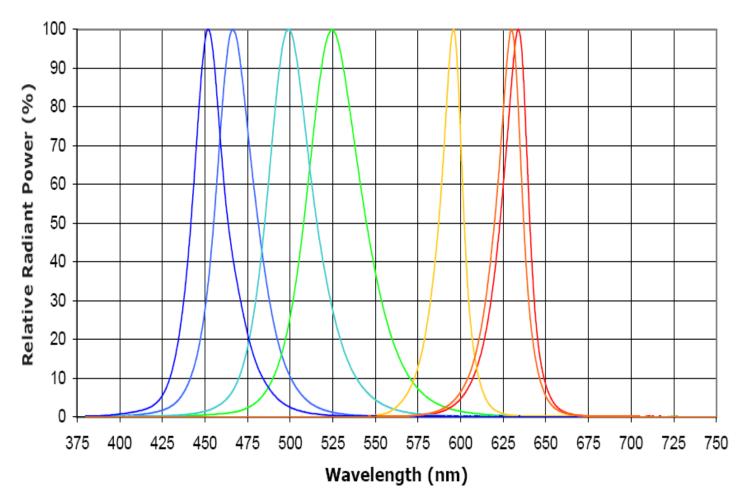
WT's WHITE, BRIGHT LEDS

High, Even Color Temperature & Even Color Frequency Blend

Western Technology uses cutting edge High Bright LEDs in all of our LED lighting systems.

We select LEDs which have very low variation in color temperature (Kelvin) and illuminance in order to ensure we meet product uniformity and light stability standards.

Western Technology Bright White LEDs have a color temperature of 6000°K, which is composed of an even color frequency blend, allowing for color filtration and diffusion capabilities with our lighting systems.



Royal Blue, Blue, Cyan, Green, Amber, Red-Orange, Red